

FAILURE MODE EFFECTS ANALYSIS/CRITICAL ITEMS LIST

FMEA NUMBER: CSD- TB-11 ORIGINATOR: JSC PROJECT: GFE Orbiter
 PART NAME: OIH LRU/ORU PART NUMBER: SED39126212-301 QUANTITY: 1
 PART NUMBER: SEG39126990-301 LRU/ORU PART NAME: TASK BOARD SYSTEM: DTO 671
 LSC CONTROL NO: N/A DRAWING/REF DESIGNATOR: SEE P/N SUBSYSTEM: EVA EXP.
 ZONE/LOCATION: PLB EFFECTIVITY/AFFECT STAGE: STS-69 & SUBS

CRITICALITY:

CRITICAL ITEM? no
 CRITICALITY CATEGORY 1R/3

SUCCESS PATHS: 5
 SUCCESS PATH REMAINING: 2

END ITEM NAME: N/A
 END ITEM FUNCTIONAL: N/A
 END ITEM CAPABILITY: N/A
 END ITEM FAILURE TOLERANCE: N/A

REDUNDANCY SCREENS:

- A/1. C/O PRELAUNCH: N/A
2. C/O ON ORBIT: N/A
- B/3. DETECTION FLIGHT CREW: N/A
4. DETECTION GROUND CREW: N/A
- C/5. LOSS OF REDUNDANCY FROM SINGLE CAUSE: N/A
5. ON-ORBIT RESTORABILITY: N/A

FUNCTION: The on orbit installed handrail(OIH) is a EVA translation aid. It is attached to the task board through a component known as a seat track. A latch lever on each handrail stanchion is inserted through the seat track to provide adequate structural attachment. A latch lever lock is provided on the handrail to prevent inadvertent detachment. On STS-69 the OIH is launch and stored in a middeck locker.

FAILURE MODE CODE: N/A
 FAILURE MODE: Latch lever or latch lever lock jams.

CAUSE: Contamination, galling, thermal distortion.

REMAINING PATHS: Other latch

EFFECT/MISSION PHASE: EVA

CORRECTIVE ACTION: If unable to insert one latch open other latch, discontinue handrail operations. If unable to open a latch close 2nd latch, leave handrail attached to task board.

-FAILURE EFFECTS-

END ITEM/LRU/ORU/ASSEMBLY: Unable to install or remove handrail on task board.

SUBSYSTEM/NEXT ASSEMBLY/INTERFACE: N/A

SYSTEM/END ITEM/MISSION: Partial loss of DTO objectives

CREW/VEHICLE : None, for multiple failures. As long as one latch remains closed the handrail can support launch or landing loads. If 4 failures were to occur the handrail could become detached from its mounting location and impact the vehicle during ascent or descent.

FAILURE MODE EFFECTS ANALYSIS/CRITICAL ITEMS LIS

FMEA NUMBER: CSD- TB-11	ORGINATOR: JSC	PROJECT: GFE Orbiter
PART NAME: OIE	LRU/ORU PART NUMBER: SED39126212-301	QUANTITY: 1
PART NUMBER: SEG39126990-301	LRU/ORU PART NAME: TASK BOARD	SYSTEM: DTO 671
LSC CONTROL NO: N/A	DRAWING/REF DESIGNATOR: SEE P/N	SUBSYSTEM: EVA EXP.
ZONE/LOCATION: PLB	EFFECTIVITY/AFFECT STAGE: STS-69 & SUBS	

HAZARD INFORMATION:

HAZARD: YES___ NO__x

HAZARD ORGANIZATION CODE: N/A

HAZARD NUMBER: N/A

TIME TO EFFECT: Hours

TIME TO DETECT: Seconds

TIME TO CORRECT: Seconds

FAILURE DETECTION/FLIGHT - Visual.

REMARKS:

-RATIONALE FOR ACCEPTABILITY-

(A) DESIGN: N/A

(B) TEST: N/A

(C) INSPECTION: N/A

(D) FAILURE HISTORY: N/A

(E) OPERATIONAL USE: N/A

(F) MAINTAINABILITY: N/A

PREPARED BY: G.Wright

REVISION:

DATE: 04/15/95

WAIVER NUMBER